

CLAIMS

1. A method of scheduling communications, comprising:
scheduling an inter-piconet transmission between first transmitting and receiving terminals including scheduling a power level for the inter-piconet transmission that satisfies a target quality parameter at the first receiving terminal; and
scheduling an intra-piconet transmission between second transmitting and receiving terminals, including scheduling a power level for the intra-piconet transmission that satisfies a target quality parameter at the second receiving terminal, the intra-piconet transmission being scheduled simultaneous with the inter-piconet transmission.
2. The method of claim 1 further comprising transmitting the schedule for the inter-piconet transmission to the first transmitting terminal, and transmitting the schedule for the intra-piconet transmission to the second transmitting terminal.
3. The method of claim 1 wherein the quality parameter comprises a carrier-to-interference ratio.
4. The method of claim 1 wherein the first transmitting terminal and the second transmitting and receiving terminals are members of a first piconet, and the first receiving terminal is a member of a second piconet.
5. The method of claim 1 wherein the first transmitting terminal and the second transmitting and receiving terminals are members of a first piconet, and the first receiving terminal is a member of the first piconet and a second piconet.
6. The method of claim 5 wherein the inter-piconet transmission comprises information, the information being destined for a third terminal, the third terminal being a member of the second piconet, but not a member of the first piconet, the method further comprising scheduling a transmission of the information from the first receiving terminal to the third terminal.

7. The method of claim 1 further comprising receiving information relating to path loss between the first transmitting and receiving terminals, the scheduled power level for the inter-piconet transmission being a function of the information.
8. The method of claim 1 wherein the first transmitting terminal and the second transmitting and receiving terminals are members of a first piconet, and the first receiving terminal is a member of a second piconet, the method further comprising transmitting the inter-piconet transmission schedule to a third terminal in the second piconet, the third terminal being responsible for scheduling intra-piconet transmissions in the second piconet.
9. The method of claim 1 further comprising assigning a first spreading code to the inter-piconet transmission, and a second spreading code to the intra-piconet transmission, the first spreading code being different from the second spreading code.
10. A method of scheduling communications, comprising:
 - receiving in a first piconet information relating to a scheduled inter-piconet transmission from a second piconet; and
 - scheduling a plurality of intra-piconet transmissions in the first piconet with no intra-piconet transmissions being scheduled simultaneously with the inter-piconet transmission.
11. A method of scheduling communications, comprising:
 - receiving in a first piconet timing information relating to a scheduled inter-piconet transmission from a first transmitting terminal in a second piconet to a first receiving terminal in the first piconet;
 - scheduling an intra-piconet transmission between second transmitting and receiving terminals in the first piconet simultaneously with the inter-piconet transmission;
 - scheduling a power level for the inter-piconet transmission that satisfies a target quality parameter at the first receiving terminal; and
 - scheduling a power level for the intra-piconet transmission that satisfies a target quality parameter at the second receiving terminal.

12. The method of claim 11 further comprising transmitting the scheduled power level for the inter-piconet transmission to a third terminal in the second piconet, the third terminal being responsible for scheduling intra-piconet transmissions in the second piconet.
13. A communications terminal, comprising:
 - a scheduler configured to schedule an inter-piconet transmission between first transmitting and receiving terminals including scheduling a power level for the inter-piconet transmission that satisfies a target quality parameter at the first receiving terminal, the scheduler further being configured to schedule an intra-piconet transmission between second transmitting and receiving terminals including scheduling a power level for the intra-piconet transmission that satisfies a target quality parameter at the second receiving terminal, the intra-piconet transmission being scheduled simultaneous with the inter-piconet transmission.
14. The communications terminal of claim 13 further comprising a transmitter configured to transmit the schedule of the inter-piconet transmission to the first transmitting terminal, and transmit the schedule of the of intra-piconet transmission to the second transmitting terminal.
15. The communications terminal of claim 14 further comprising a transceiver having the transmitter, and a user interface configured to allow a user to engage in communications with another terminal through the transceiver.
16. The communications terminal of claim 15 wherein the user interface comprises a keypad, a display, a speaker and a microphone.
17. The communications terminal of claim 13 wherein the quality parameter comprises a carrier-to-interference ratio.
18. The communications terminal of claim 13 wherein the first transmitting terminal and the second transmitting and receiving terminals are members of a first piconet, and the first receiving terminal is a member of a second piconet.

19. The communications terminal of claim 13 wherein the first transmitting terminal and the second transmitting and receiving terminals are members of a first piconet, and the first receiving terminal is a member of the first piconet and a second piconet.
20. The communications terminal of claim 19 wherein the inter-piconet transmission comprises information, the information being destined for a third terminal, the third terminal being a member of the second piconet, but not a member of the first piconet, the scheduler being further configured to schedule a transmission of the information from the first receiving terminal to the third terminal.
21. The communications terminal of claim 13 further comprising a receiver configured to receive information relating to path loss between the first transmitting and receiving terminals, the scheduled power level for the inter-piconet transmission being a function of the information.
22. The communications terminal of claim 13 wherein the first transmitting terminal and the second transmitting and receiving terminals are members of a first piconet, and the first receiving terminal is a member of a second piconet, the communications terminal further comprising a transmitter configured to transmit the inter-piconet transmission schedule to a third terminal in the second piconet, the third terminal being responsible for scheduling intra-piconet transmissions in the second piconet.
23. The communications terminal of claim 13 further comprising a processor configured to assign a first spreading code to the inter-piconet transmission and a second spreading code to the intra-piconet transmission, the first spreading code being different from the second spreading code.
24. A communications terminal operable in a first piconet, comprising:
 - a receiver configured to receive information relating to a scheduled inter-piconet transmission from a second piconet; and
 - a scheduler configured to schedule a plurality of intra-piconet transmissions in the first piconet with no intra-piconet transmissions being scheduled simultaneously with the inter-piconet transmission.

25. A communications terminal operable in a first piconet, comprising:
- a receiver configured to receive timing information relating to a scheduled inter-piconet transmission from a first transmitting terminal in a second piconet to a first receiving terminal in the first piconet; and
 - a scheduler configured to schedule an intra-piconet transmission between second transmitting and receiving terminals in the first piconet simultaneously with the inter-piconet transmission, the scheduler being further configured to schedule a power level for the inter-piconet transmission that satisfies a target quality parameter at the first receiving terminal, and schedule a power level for the intra-piconet transmission that satisfies a target quality parameter at the second receiving terminal.
26. The communications terminal of claim 25 further comprising a transmitter configured to transmit the scheduled power level for the inter-piconet transmission to a third terminal in the second piconet, the third terminal being responsible for scheduling intra-piconet transmissions in the second piconet.
27. A communications terminal, comprising:
- means for scheduling an inter-piconet transmission between first transmitting and receiving terminals including scheduling a power level for the inter-piconet transmission that satisfies a target quality parameter at the first receiving terminal; and
 - means for scheduling an intra-piconet transmission between second transmitting and receiving terminals, including scheduling a power level for the intra-piconet transmission that satisfies a target quality parameter at the second receiving terminal, the intra-piconet transmission being scheduled simultaneous with the inter-piconet transmission.